

REMARKS:

1. In response to the Office Action mailed 06/19/2008, the applicant amends his application. The specification is amended at pages 4, 5, 7 and 8. Claims 1-7 and 9-10 are hereby amended. Three new claims 11-13 are hereby added. Support for the amendments is found at page 15, lines 5 and 20-24. No new matter is added.
2. The specification was objected to on the grounds of the vague usage of the term "camera devices". In response, the specification has been amended to make clear that the term "camera devices" includes the image sensor 12 and the optics 20.1, 20.2 and 20.2'.
3. The specification also was objected to on the grounds of the vague usage of the term "surprisingly". In response, the specification has been amended to remove the term "surprisingly".
4. Claims 1-10 are amended as being unpatentable over Vance et al., U.S. Pat. No. 6,992,699 ("Vance") in view of Arai et al., U.S. Pub. No. 2002/0160724 ("Arai"). In response, claims 1-10 are amended in order to more clearly and more patentably distinguish the present invention over the prior art. As a result, and for the reasons given below, it is believed these rejections are traversed.
5. It is believed the following discussion of the references and the present invention is helpful.

Vance is a combination mobile terminal and camera with multiple light apertures in the housing 40. (abstract) One aperture 46 is disposed on a front side of the housing while another aperture 48 is disposed on a rear side of the housing. Vance includes a rotating mirror assembly 52 which is fixed between the two apertures 46, 48. The mirror assembly is arranged to be rotated by a shaft 62, which extends through the housing 40 and terminates in a ring 64. The user rotates the ring 64 in order to rotate the mirror assembly 52. As the mirror assembly rotates, light is selected from either the front aperture 46 or the rear aperture 48 to be reflected by means of a rotating mirror 56 to a fixed image sensor 32, which is mounted to a printed circuit board 38. (Figures 4-6, 13, col. 3, lines 5-62) In Vance, the mirror 56 moves, while the image sensor 32 is fixed.

Arai is a mobile terminal having a rotating camera unit 9 mounted on the top of the mobile terminal housing. (abstract, Figures 1-2) In a first embodiment, the camera rotates on an axis that is longitudinal to the rectangular mobile terminal housing body. (Figures 1-2) In a second embodiment, the camera rotates on an axis that is transverse to the rectangular mobile terminal housing body. (Figure 9) In Arai, the camera unit 9 mounts a single video camera aperture 10 that rotates from the front side of the mobile terminal housing body to the rear side of the mobile terminal housing body.

The present invention includes a mobile terminal having a front side (FS) and a backside (BS), with two apertures 21.1, 21.2 fixed on opposite sides of the mobile terminal housing, thus forming a spacing therebetween. The image sensor 12 is arranged to rotate inside the case structure to point either through the FS aperture 21.2 or the backside aperture 21.1. (Figures 2-3) Also, the image sensor 12 is arranged to be linearly moved inside the case structure in order to permit its rotation (Figures 4a-4b).

6. As to claim 1, this claim reads as follows:

An apparatus comprising  
-a case structure,  
-a display component fitted with the case structure,  
-a camera device, including an image sensor fitted entirely inside the case structure and optics,  
-an aperture arrangement including at least two apertures fitted in the case structure, for exposing the image sensor directly from the outside, in which the image sensor is rotatable to at least two exposure directions, at least to the display-component side and to an opposite side relative to the display component, according to which exposure directions the aperture arrangement is arranged in the case structure and at least part of the optics is arranged to be rotatable along with the image sensor and at least part of the optics is arranged in connection with the aperture arrangement, and a mechanism configured to move at least the image sensor linearly in the case structure to a position clear of the first and second apertures, in order to permit rotation of the image sensor.  
(emphasis added)

In Vance, as discussed above, the image sensor 32 is fixed, and thus cannot be linearly moved in the case structure in order to permit its rotation, as required by the

language of claim 1. Also, the image sensor 32, being fixed, is not arranged to be rotated even assuming somehow it could be moved to a position clear of the two apertures 46 and 48, as required by the language of claim 1.

In Arai, as discussed above, there is only one aperture 10 which rotates along with the camera unit 9 itself. Therefore the image sensor cannot be linearly moved in the case structure in order to permit its rotation, as required by the language of claim 1.

Also, since there is only one aperture fixed to the camera unit 9 itself, the imaging sensor does not move to a position clear of the two apertures on the case structure, as required by the language of claim 1.

Moreover, combining Vance and Arai does not provide the feature of an image sensor being able to be linearly moved in the case structure to permit its rotation. Nor does combining Vance and Arai provide the feature of an image sensor being able to be rotated once it has moved to a position clear of the two apertures. As a result, claim 1 is allowable over Vance and Arai and, moreover, the rejection is traversed.

7. Dependent claims 2-6 and 13 are allowable at least on the grounds that, as explained in 6 above, their common parent claim 1 is itself allowable.

8. As for claim 7, this claim reads:

A method for controlling the orienting of a camera devices in an electronic device, in which there are directional camera devices inside the case structure of the device, including at least an image sensor and optics, and in which the case structure includes an aperture arrangement including at least two apertures in connection with at least part of the optics is arranged for exposing the image sensor directly from the outside, which aperture arrangement is arranged in at least two exposure directions at least to a display-component side and to an opposite side relative to the display component, and in which method -the image sensor and at least part of the said optics is oriented by rotating them to the selected exposure direction without directing the orienting operations to the actual case structure of the device and -imaging is performed,  
characterized in that, the image sensor and the said part of the optics are linearly moved in the case structure to a position clear of the first and second apertures, in order to permit rotation of the image sensor.  
(emphasis added)

This claim 7 is based on claim 1 and thus is allowable for the same reasons given in 6 above in support of the allowability of claim 1. Moreover, neither

Vance nor Arai disclose or suggest the claimed language "characterized in that, the image sensor and the said part of the optics are linearly moved in the case structure to a position clear of the first and second apertures, in order to permit rotation of the image sensor".

Dependent claims 8-9 are allowable at least on the grounds that their common parent claim 7 is itself allowable.

9. As for claim 10, this claim reads:

An image sensor, which can fitted to an electronic device, which electronic device includes

- a case structure,
- a display component arranged in connection with the case structure,
- a camera device fitted inside the case structure, including the said entirely internally fitted image sensor and optics, and
- an aperture arrangement including at least two apertures fitted in the case structure in connection with which aperture arrangement at least part of the optics is arranged, for exposing the image sensor directly from the outside,

in which the image sensor is rotatable to at least two exposure directions, at least to the display-component side and to an opposite side relative to the display component, according to which exposure directions the aperture arrangement is arranged in the case structure and at least part of the optics is arranged to be rotatable along with the image sensor, characterized in that the image sensor and the optics arranged in connection with it can be linearly moved in the case structure to a position clear of the first and second apertures, in order to permit rotation of the image sensor.

(emphasis added)

This claim 10 is based on claim 1 and thus is allowable for the same reasons given in 6 above in support of the allowability of claim 1. Moreover, neither Vance nor Arai disclose or suggest the claimed language "characterized in that the image sensor and the optics arranged in connection with it can be linearly moved in the case structure to a position clear of the first and second apertures, in order to permit rotation of the image sensor".

10. As for claim 11, this claim reads:

An electronic device comprising a case having a front side and a back side with at least two apertures, with two apertures arranged so that one aperture is on the front side and another aperture is on the back side, the two apertures aligned with each other,

an image sensor disposed between the front side and the back side rotatable to selectively point through either aperture, and a mechanism configured to slide the image sensor inside the case to a position away from the aligned apertures at which position the image sensor is rotatable.

In Vance, as discussed above, the image sensor 32 is fixed, and cannot slide inside the electronic device case in order to permit its rotation, as required by the language of claim 11. Also, the image sensor 32, being fixed, is not arranged to be rotated even assuming it were able to move away from the two apertures 46 and 48, as required by the language of claim 11.

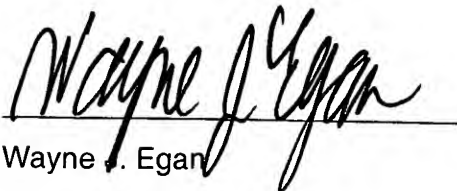
In Arai, as discussed above, there is only one aperture 10 which rotates along with the camera unit 9 itself. Therefore the image sensor cannot slide inside the electronic device case in order to permit its rotation, as required by the language of claim 11. Also, since there is only one aperture fixed to the camera unit 9 itself, it does not move away from the two two apertures on the case structure, as required by the language of claim 11.

Moreover, combining Vance and Arai does not provide the features described above. As a result, claim 11 is allowable over Vance and Arai.

11. Claim 12 is allowable at least on the grounds that, as explained in 10 above, its parent claim 11 is allowable.

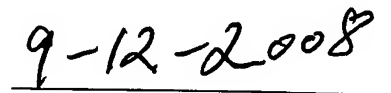
12. Should any unresolved issue remain, the Examiner is cordially invited to call Applicants' attorney at the telephone number indicated below.

Respectfully submitted:

  
Wayne J. Egan

Reg. No.: 33,168

Customer No.: 29683

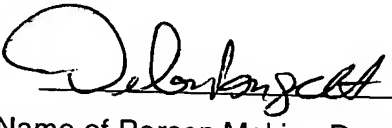
  
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HARRINGTON & SMITH, PC  
4 Research Drive  
Shelton, CT 06484-6212  
Telephone: (203)925-9400  
Facsimile: (203)944-0245  
email: wegan@hspatent.com

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September 12, 2008   
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